Listing of Claims

The following listing of claims is intended to supercede all previously filed listings of claims. Changes are shown with deletions in ~~strikethrough~~ and additions underlined.

Kindly enter the following amendments to the claims:

Claim 1 (Withdrawn). A control device (21) for controlling an electric stapler (1), said control device comprising:

a microprocessor (22), an electrical motor (2) that is incorporation in a stapler (1) and whose drive shaft (9) drives a staple driver (13) in a forward and reverse motion that has a defined start point and a defined reversing point, and which staple driver drives, during its forward motion, a staple (15) into a workpiece (17); and

said control device (21) further comprising a sensor (23) that senses the rotational speed of the drive shaft (9) and the degree of rotation it has completed from the start point, the control device then transfers the sensed information to the microprocessor (22) that analyzes the obtained information and generates a control signal that controls the supply of current to the drive motor (2) whereupon the rotational speed of the drive shaft is regulated.

Claim 2 (Withdrawn). The control device according to claim 1, wherein said workpiece is a sheaf of paper.

Claim 3 (Withdrawn). The control device according to claim 1, wherein the supply of current occurs across a full bridge (27), whereupon the supply of current is controlled so that the rotational direction and speed of the drive shaft (9) is regulated.

Claim 4 (Previously Presented). A method for controlling an electric stapler, said method comprising:

arranging a sensor for detecting positions of a staple driver of the electric stapler during execution of a stapling process;

utilizing a microprocessor to analyze sensed position information about the staple driver; and

controlling positional changes of the staple driver based on the analysis of sensed position information.

Claim 5 (Original). The method for controlling an electric stapler according to claim 4, further comprising:

Affecting positional changed of the staple driver by supplying controlled magnitudes of electrical current to a drive motor that is interconnected with the staple driver.

Claim 6 (Original). The method for controlling an electric stapler according to claim 4, further comprising:

affecting directional changes in movement of the staple driver by supplying opposite sense electrical current to a drive motor interconnect with the staple driver.

Claim 7 (Original). The method for controlling an electric stapler according to claim 6, further comprising:

utilizing a circuit internal to the electric stapler for switching the sense of the electrical current that is supplied to the drive motor that is interconnect with the staple driver.

Claim 8 (Original). The method for controlling an electric stapler according to claim 4, further comprising:

detecting positions of a staple driver on a real time basis.

Claim 9 (Original). The method for controlling an electric stapler according to claim 8, further comprising:

computing speed of travel of the staple driver based on a series of positions of the staple driver taken on a real time basis.

Claim 10 (Previously Presented). The method for controlling an electric stapler according to claim 4, further comprising:

driving said staple driver via an electric motor having a drive shaft rotatingly extending therefrom; and

utilizing said sensor to detect and report rotational speed of the drive shaft.

Claim 11 (Original). The method for controlling an electric stapler according to claim 10, further comprising:

utilizing said sensor to detect and report rotational positions of the drive shaft.

Claim 12 (Original). The method for controlling an electric stapler according to claim 10, further comprising:

interconnecting the drive shaft with the staple driver via at least one toothed gear thereby establishing a directly proportional relationship between rotational characteristics of the drive shaft and translational characteristics of the staple driver.

Claim 13 (Original). The method for controlling an electric stapler according to claim 10, further comprising:

interconnecting the drive shaft with the staple driver via a plurality of interacting toothed gears thereby establishing a directly proportional relationship between rotational characteristics of the drive shaft and translational characteristics of the staple driver.

Claim 14 (Original). The method for controlling an electric stapler according to claim 10, further comprising:

reversing the direction of travel of the staple driver based on a sensed degree of rotation of the drive shaft correlating to a completed stapling action.

Claim 15 (Original). The method for controlling an electric stapler according to claim 10, further comprising:

slowing the travel speed of the staple driver upon approach to a completion position of a stapling action.

Claim 16 (Original). The method for controlling an electric staple according to claim 4, further comprising:

reversing the direction of travel of the staple driver when a completion position of a stapling action is sensed and prior to a detrimental load being imposed upon the staple driver and an associated powering transmission.

Claim 17 (Original). The method for controlling an electric stapler according to claim 16, further comprising:

arranging the associated powering transmission to include at least a drive shaft extending from a driving electrical motor, a plurality of interacting toothed gears and an interacting toothed rack.

Claim 18 (Previously Presented). The method for controlling an electric stapler according to claim 17, further comprising:

arranging a toothed rack to be a part of the staple driver.

Claim 19 (Withdrawn). The method for controlling an electric stapler according to claim 1, further comprising utilizing a control device to control the electric stapler, said control device comprising:

a microprocessor, an electrical drive motor and a drive shaft configured to drive a staple driver in a forward and reverse motion that defines a start point and a reversing point, the staple driver configured to drive, during forward motion, a staple into a workpiece; and

the control device further comprising a sensor adapted to sense a rotational speed of the drive shaft and a degree of rotation relative to the start point, the control device being further adapted to transfer sensed information to the microprocessor that analyzes the obtained information and generates a control signal that controls the supply of current to the drive motor whereby the rotational speed of the drive shaft is regulated.

Claim 20 (Withdrawn). The method for controlling an electric stapler according to claim 19, wherein said workpiece is a sheaf of paper.

Claim 21 (Withdrawn). The method for controlling an electric stapler according to claim 19, wherein the supply of current occurs across a full bridge whereby the supply of current is controlled so that the rotational direction and speed of the drive shaft is regulated.

Claim 22 (Previously Presented). A method for controlling an electric stapler, said method comprising:

providing a drive shaft driven electric stapler for coupling together a multi-member

workpiece;

sensing, during a stapling movement, drive shaft speed and degree of rotation of the drive shaft measured from a start point; and

adjusting the electric supply of current that powers the drive shaft during the stapling process in dependence upon the sensed drive shaft speed and measured degree of rotation.

Claim 23 (Previously Presented). The method for controlling an electric stapler according to claim 22, wherein the supply of current is increased when high resistance to drive shaft movement is detected.

Claim 24 (Previously Presented). The method for controlling an electric stapler according to claim 22, wherein the supply of current is decreased upon approach to a reverse position of the electric stapler.